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BONANTO, GEORGE P	
ART UNIT	**PAPER NUMBER**
2855	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/799,241	BONDHUS ET AL.
	Examiner	Art Unit
	George P. Bonanto	2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12 March 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: page 6, lines 18-19 contains the phrase, " the proximal end 22 of the biasing assembly aperture 30." The element "biasing assembly portion 30" should be deleted and the element "inner handle 20" should be inserted in it's place.

In addition, page 9, line 8, contains the phrase, "functioning of the mechanism." The word "mechanism" should be deleted and the element "torque limiting tool" should be inserted in its place.

Finally, page 9, line 19, contains the word, "treaded." The word "treaded should be deleted and the word "threaded" should be inserted in its place.

Appropriate correction is required.

Claim Objections

Claim 17 is objected to because of the following informalities: claim 17 contains the phrase, "a retainer engaged with the proximal end of the inner handle." The claim element "proximal end of the inner handle" lacks antecedent basis. Appropriate correction is required.

Claim 18 is objected to because of the following informalities: claim 18 contains the phrase, "the leading edge of the biasing member form an acute angled." The word "form" should be deleted and the word "forms" should be inserted in its place. In addition, the word "angled" should be deleted and the word "angle" should be inserted in its place. Appropriate correction is required.

Claims 18- 21 are objected to because of the following informalities: claims 18-21 depend from claim 16. It is apparent, however, that claims 18-21 were intended to depend from claim 17. Appropriate correction is required.

Claim 21 is objected to because of the following informalities: claim 21 contains the phrase, "a proximal end of the inner handles." The word "handles" should be deleted and the word "handle" should be inserted in its place. Appropriate correction is required.

Claim 33 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form.

Claim 42 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 7-10, 13, 15-19, 23, 24, 26, 28, 31-40, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 6,176,162 to Ludwig et al.

As to claim 1, Ludwig et al disclose a torque limiting tool comprising an inner handle (tool drive shaft 30, Fig. 1) comprising a tool coupling portion (tool receptacle 26, Fig 1) and at least one radially oriented slot (radial bores 38, Fig. 1) at least one interface member located in

the radially oriented slot, the interface member comprising and elongated surface generally oriented along a longitudinal axis of the inner handle (small balls 39, Fig. 1) a biasing assembly located in a biasing assembly aperture that provides a longitudinal biasing force to bias the interface member radially outward (central ball 40 and fourth spring element 48 in bore 41, Fig. 1; col. 7 lines 7-9) and an outer handle having an inner surface limiting radial displacement of the interface member (housing 11 and second claw elements 37, Fig. 1; col. 7 lines 12-15).

As to claim 2, Ludwig et al. further disclose that the tool coupling portion comprises a tool receiving aperture extending along the longitudinal axis of the inner handle (tool receptacle 26, Fig. 1; col. 8 lines 20-22).

As to claim 5, Ludwig et al. further disclose that the biasing assembly aperture is connected to the radially oriented slot (bore 41 connected to radial bores 38, Fig. 1).

As to claim 7, Ludwig et al. further disclose that the radially oriented slots comprise at least on angled surface (side walls of radial bores 38 angled with respect to side walls of bore 41, Fig. 1).

As to claim 8, Ludwig et al. further disclose that the interface member comprises at least one surface oriented toward the biasing assembly at an acute angle with respect to the longitudinal axis (interface member, being central ball 40 has a round surface that makes an acute angle with the longitudinal axis, Fig. 1).

As to claim 9, Ludwig et al. further disclose that the elongated surface of the interface member is generally flush with an outer surface of the inner handle when the longitudinal biasing force is removed (small balls 39 flush with outer surface of tool drive shaft 30, Fig. 1).

As to claim 10, Ludwig et al. further disclose that the biasing force displaces the elongated surface of the interface member above an outer surface of the inner handle (col. 7, lines 7-16).

As to claim 13, Ludwig et al. further disclose that the elongated surface comprises a curvilinear shape (small balls 39, Fig. 1).

As to claim 15, Ludwig et al. further disclose that the biasing assembly comprises a spring (fourth spring element 48, Fig. 1).

As to claim 16, Ludwig et al. further disclose that the longitudinal biasing force is adjustable (col. 7, lines 31-41).

As to claim 17, Ludwig et al. further disclose that the biasing assembly comprises a biasing member comprising a leading edge engaged with the interface member (central ball 40 front surface engaged with small balls 39, Fig. 1) a retainer engaged with the proximal end of the inner handle (blind hole 49, Fig. 1) and a spring compressively interposed between the biasing member and the retainer (fourth spring element 48, Fig. 1)

As to claim 18, Ludwig et al. further disclose that the leading edge of the biasing member forms an acute angle with respect to the longitudinal axis (central ball 40 has a round surface that makes an acute angle with respect to the longitudinal axis, Fig. 1).

As to claim 19, Ludwig et al. further disclose that the biasing member is slidably engaged with the biasing assembly aperture (col. 6 line 58 to col. 7 line 6).

As to claim 23, Ludwig et al. further disclose that the inner surface of the outer handle comprises a curvilinear surface (cylindrical housing 11 and second claw elements 37, Fig. 1).

As to claim 24, Ludwig et al. further disclose that the inner surface of the outer handle comprises a smooth surface (cylindrical housing 11 and second claw elements 37, Fig. 1).

As to claim 26, Ludwig et al. further disclose that the inner surface of the outer handle substantially surrounds the inner handle (cylindrical housing 11 and second claw elements 37, Fig. 1).

As to claim 28, Ludwig et al. further disclose that the inner handle rotates within the outer handle when a torque applied to the tool coupling portion exceeds a threshold value (col. 8, lines 49-56).

As to claim 31, Ludwig et al. further disclose an elongated outer handle having a primary opening to a central aperture adapted to receive the inner handle (housing 11, Fig. 1) and a cap adapted to retain the inner handle in the outer handle (adjusting sleeve 13, Fig. 1).

As to claim 32, Ludwig et al. further disclose that one or more of the inner handle, the outer handle, and the interface members comprises metal, ceramic, polymeric materials, a composite or a combination thereof (depth stop 21 is plastic, col. 7 line 64 to col. 8 line 3).

As to claim 33, Ludwig et al. further disclose that the biasing assembly is located in a biasing assembly aperture (central ball 40 and fourth spring element 48 in bore 41, Fig. 1; col. 7 lines 7-9).

As to claim 34, Ludwig et al. further disclose that the biasing assembly aperture is located in the inner handle (central ball 40 and fourth spring element 48 in bore 41, Fig. 1).

As to claim 35, Ludwig et al. disclose a torque limiting tool comprising an inner handle (tool drive shaft 30, Fig. 1) comprising a tool coupling portion (tool receptacle 26, Fig 1) and at

least one radially oriented slot (radial bores 38, Fig. 1) at least one interface member located in the radially oriented slot, the interface member comprising an elongated surface generally oriented along a longitudinal axis of the inner handle (small balls 39, Fig. 1) a biasing means located in a biasing assembly aperture for providing a longitudinal biasing force to bias the interface member radially outward (central ball 40 and fourth spring element 48 in bore 41, Fig. 1; col. 7 lines 7-9) and an outer handle having an inner surface limiting radial displacement of the interface member (housing 11 and second claw elements 37, Fig. 1; col. 7 lines 12-15).

As to claim 36, Ludwig et al disclose an adjustable torque limiting tool comprising an inner handle (tool drive shaft 30, Fig. 1) comprising a tool coupling portion at a distal end (tool receptacle 26, Fig 1) and a biasing assembly aperture at a proximal end (bore 41, Fig. 1) the inner handle including at least one radially oriented slot located between the biasing assembly aperture and the distal end (radial bores 38, Fig. 1) at least one interface member located in the radially oriented slot, the interface member comprising an elongated surface generally oriented along a longitudinal axis (small balls 39, Fig. 1) a biasing assembly located in the biasing assembly aperture providing a longitudinal biasing force that biases the interface member radially outward (central ball 40 and fourth spring element 48 in bore 41, Fig. 1; col. 7 lines 7-9) and an outer handle having an inner surface limiting radial displacement of the interface member (housing 11 and second claw elements 37, Fig. 1; col. 7 lines 12-15).

As to claim 37, Ludwig et al. disclose a method of limiting torque transmission comprising the steps of generating a longitudinal biasing force along a longitudinal axis of an inner handle (col. 7 lines 7-9) coupling the longitudinal biasing force to one or more interface

members, the longitudinal biasing force biasing a longitudinally oriented elongated surface on the interface members radially outward (col. 7 lines 7-9) restraining the radial movement of the interface members in an outer handle surrounding at least a portion of the inner handle (col. 7 lines 7-16) and permitting the inner handle to rotate relative to the outer handle when a torque applied to the inner handle exceeds a threshold level (col. 8, lines 49-56).

As to claim 38, Ludwig et al. further disclose coupling one of a plurality of tools to the inner handle (col. 5 lines 44-47).

As to claim 39, Ludwig et al. further disclose adjusting the longitudinal biasing force (col. 7, lines 31-41).

As to claim 40, Ludwig et al further disclose displacing the elongated surface above an outer surface of the inner handle (col. 7, lines 7-16).

As to claim 42, Ludwig et al. further disclose rotating the inner handle within the outer handle when a torque applied to the inner handle exceeds a threshold value (col. 8, lines 49-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10, 13-24, 26-29, 31-33, 35 and 37-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,239,875 to Stasiek et al. in view of U.S. Pat. No. 6,176,162 to Ludwig et al.

As to claim 1, Stasiek et al. disclose a torque limiting tool comprising an inner handle (drive shaft 12, Fig. 2) comprising a tool coupling portion (work engaging head 15, Fig. 2) and at least one axial slot (upper end 44 of drive member 45 Figs. 5a, 5b and 6) and at least one interface member, the interface member located in the axial slot comprising an elongated surface generally oriented along a longitudinal axis of the inner handle (balls 36 and cylinders 49, Figs. 5a and 5b) a biasing assembly (heavy coil spring 55 and driven member 30, Figs. 5a and 5b) located in a biasing assembly aperture (hollow portion of tubular handle 13, Fig. 3) that provides a longitudinal biasing force to bias the interface member toward the axial slot (col. 7 lines 11-30) and an outer handle (tubular handle 13, Fig. 3). Stasiek et al. fail, however to disclose radially oriented slots, a longitudinal biasing force to bias the interface members radially outward, the outer handle having an inner surface limiting radial displacement of the interface member.

Ludwig et al. disclose radially oriented slots (radial bores 38, Fig. 1) a longitudinal biasing force to bias the interface member radially outward (central ball 40 and fourth spring element 48 in bore 41, Fig. 1; col. 7 lines 7-9) and an outer handle having an inner surface limiting radial displacement of the interface member (housing 11 and second claw elements 37, Fig. 1; col. 7 lines 12-15).

It would have been obvious to one of ordinary skill in the art to modify the torque limiting tool of Stasiek et al. to include the radial slot, radially biased interface member and radial displacement limiting inner surface of the outer handle in order to eliminate the need for an anti-friction thrust bearing since the interface members (small balls) act as rotational bearing to decrease the friction force.

As to claim 2, Ludwig et al. further disclose that the tool coupling portion comprises a tool receiving aperture extending along the longitudinal axis of the inner handle (tool receptacle 26, Fig. 1; col. 8 lines 20-22).

As to claim 3, Stasiek et al. further disclose that the tool coupling portion comprises an outer surface of the inner handle (male drive piece 16, Fig. 2).

As to claim 4, Stasiek further discloses a plurality of tools each adapted to releasably engage with the tool coupling portion (col. 4, lines 63-68).

As to claim 5, Ludwig et al. further disclose that the biasing assembly aperture is connected to the radially oriented slot (bore 41 connected to radial bores 38, Fig. 1).

As to claim 6, Stasiek et al. further disclose that a proximal end of the biasing assembly aperture comprises a threaded portion (interior threaded portion of drive member 45, which is considered to be part of the hollow portion of tubular handle 13, Fig. 2).

As to claim 7, Ludwig et al. further disclose that the radially oriented slots comprise at least one angled surface (side walls of radial bores 38 angled with respect to side walls of bore 41, Fig. 1).

As to claim 8, Ludwig et al. further disclose that the interface member comprises at least one surface oriented toward the biasing assembly at an acute angle with respect to the longitudinal axis (interface member, being central ball 40 has a round surface that makes an acute angle with the longitudinal axis, Fig. 1).

As to claim 9, Ludwig et al. further disclose that the elongated surface of the interface member is generally flush with an outer surface of the inner handle when the longitudinal biasing force is removed (small balls 39 flush with outer surface of tool drive shaft 30, Fig. 1).

As to claim 10, Ludwig et al. further disclose that the biasing force displaces the elongated surface of the interface member above an outer surface of the inner handle (col. 7, lines 7-16).

As to claim 13, Stasiek et al. further disclose that the elongated surface comprises a curvilinear shape (balls 36, Figs. 5a and 5b).

As to claim 14, Stasiek et al. further disclose that the elongated surface comprises a planar portion (cylinders 49 have planar end portions, Figs. 5a and 5b).

As to claim 15, Stasiek et al. further disclose that the biasing assembly comprises a spring (heavy coil spring 55, Figs. 5a and 5b).

As to claim 16, Stasiek et al. further disclose that the longitudinal biasing force is adjustable (col. 7, lines 11-30).

As to claim 17, Stasiek et al. further disclose that the biasing assembly comprises a biasing member (driven member 30, Fig. 2) comprising a leading edge (lower flat surface 34 and ball seats 35, Fig. 2) engaged with the interface member (balls 36 and cylinders 49, Figs. 5a and 5b) a retainer engaged with the proximal end of the inner handle and a spring compressively interposed between the biasing member and the retainer (col. 8, lines 46-55).

As to claim 18, Stasiek et al. further disclose that the leading edge of the biasing member forms an acute angle with respect to the longitudinal axis (ball seats 35 form acute angles with respect to the longitudinal axis near the edges).

As to claim 19, Stasiek et al. further disclose that the biasing member is slidably engaged with the biasing assembly aperture (col. 5, line 33).

As to claim 20, Stasiek et al. further disclose that the retainer is threadably engaged with a proximal end of the inner handle (col. 8, lines 46-55).

As to claim 21, Stasiek et al. further disclose that the location of the retainer relative to a proximal end of the inner handle is adjustable (col. 8, lines 46-55).

As to claim 22, Stasiek et al. further disclose that the inner surface of the outer handle comprises a plurality of detents (col. 6, lines 27-30).

As to claim 23, Stasiek et al. further disclose that the inner surface of the outer handle comprises a curvilinear surface (tubular body 13, Fig. 3).

As to claim 24, Stasiek et al. further disclose that the inner surface of the outer handle comprises a generally smooth surface (tubular body 13, Fig. 3).

As to claim 26, Stasiek et al. further disclose that the inner surface of the outer handle substantially surrounds the inner handle (Fig. 3).

As to claim 27, Stasiek et al. disclose that the interface members are displaced inward when the torque applied to the inner handle exceeds a threshold value (col. 8, lines 46-55) but fails to disclose that the displacement is radially inward.

Ludwig et al. disclose displacing the interface members radially inward when a force overcomes the resistance of the biasing assembly (col. 8 line 65 to col. 9 line4).

It would have been obvious to one of ordinary skill in the art to modify the method of Stasiek et al. to include the step of displacing the interface member radially inward when a torque on the inner handle exceeds a threshold value in order to allow the interface members to act as rotational bearings, eliminating duplicative parts saving material and assembly time cost.

As to claim 28, Stasiek et al. further disclose that the inner handle rotates within the outer handle when a torque applied to the tool coupling portion exceeds a threshold value (col. 8, lines 53-55).

As to claim 29, Stasiek et al. further disclose that the rotation of the inner handle relative to the outer handle is bi-directional (grooves give "play" to the mounting of the driven member, meaning it can move back and forth within the 30 degree arc, col. 5 lines 33-60).

As to claim 31, Stasiek et al. further disclose an elongated outer handle having a primary opening to a central aperture adapted to receive the inner handle (Fig. 3) and a cap adapted to retain the inner handle in the outer handle (hex head nut 41, Fig. 3).

As to claim 32, Stasiek et al. further disclose that one or more of the inner handle the outer handle and the interface members comprises metal (col.2, line 67).

As to claim 33, Stasiek et al. further disclose that the biasing assembly is located in a biasing assembly aperture (Fig. 3).

As to claim 35, Stasiek et al. disclose a torque limiting tool comprising an inner handle (drive shaft 12, Fig. 2) comprising a tool coupling portion (work engaging head 15, Fig. 2) and at least one axial slot (upper end 44 of drive member 45 Figs. 5a, 5b and 6) and at least one interface member, the interface member located in the axial slot comprising an elongated surface generally oriented along a longitudinal axis of the inner handle (balls 36 and cylinders 49, Figs. 5a and 5b) a biasing assembly (heavy coil spring 55 and driven member 30, Figs. 5a and 5b) located in a biasing assembly aperture (hollow portion of tubular handle 13, Fig. 3) that provides a longitudinal biasing force to bias the interface member toward the axial slot (col. 7 lines 11-30) and an outer handle (tubular handle 13, Fig. 3). Stasiek et al. fail, however to disclose radially

oriented slots, a longitudinal biasing force to bias the interface members radially outward, the outer handle having an inner surface limiting radial displacement of the interface member.

Ludwig et al. disclose radially oriented slots (radial bores 38, Fig. 1) a longitudinal biasing force to bias the interface member radially outward (central ball 40 and fourth spring element 48 in bore 41, Fig. 1; col. 7 lines 7-9) and an outer handle having an inner surface limiting radial displacement of the interface member (housing 11 and second claw elements 37, Fig. 1; col. 7 lines 12-15).

It would have been obvious to one of ordinary skill in the art to modify the torque limiting tool of Stasiek et al. to include the radial slot, radially biased interface member and radial displacement limiting inner surface of the outer handle in order to eliminate the need for an anti-friction thrust bearing since the interface members (small balls) act as rotational bearing to decrease the friction force.

As to claim 37, Stasiek et al. disclose a method of limiting torque transmission comprising the steps of generating a longitudinal biasing force along the longitudinal axis of an inner handle (col. 7 lines 11-30) coupling the longitudinal biasing force to one or more interface members (col. 8, lines 46-55) and permitting the inner handle to rotate relative to the outer handle when a torque applied to the inner handle exceeds a threshold level (col. 3, lines 59-61). Stasiek et al. fail, however, to disclose that the longitudinal biasing force biases the interface members radially outward and that an inner surface of an outer handle restrains the radial movement of the interface members.

Ludwig et al. disclose coupling the longitudinal biasing force to one or more interface members, the longitudinal biasing force biasing a longitudinally oriented elongated surface on

the interface members radially outward (col. 7 lines 7-9) and restraining the radial movement of the interface members in an outer handle surrounding at least a portion of the inner handle (col. 7 lines 7-16).

It would have been obvious to one of ordinary skill in the art to modify the method of Stasiek et al. to include the steps of biasing the interface members radially outward, and limiting the radial displacement of the interface members using the inner surface of the outer handle in order to allow the interface members to act as rotational bearings, eliminating duplicative parts saving material and assembly time cost.

As to claim 38, Stasiek et al. further disclose coupling one of a plurality of tools to the inner handle (col. 4, lines 63-68).

As to claim 39, Stasiek et al. further disclose adjusting the longitudinal biasing force (col. 8, lines 49-53).

As to claim 40, Ludwig et al further disclose displacing the elongated surface above an outer surface of the inner handle (col. 7, lines 7-16).

As to claim 41, Stasiek et al. disclose that the interface members are displaced inward when the torque applied to the inner handle exceeds a threshold value (col. 8, lines 46-55) but fails to disclose that the displacement is radially inward.

Ludwig et al. disclose displacing the interface members radially inward when a force overcomes the resistance of the biasing assembly (col. 8 line 65 to col. 9 line4).

It would have been obvious to one of ordinary skill in the art to modify the method of Stasiek et al. to include the step of displacing the interface member radially inward when a

torque on the inner handle exceeds a threshold value in order to allow the interface members to act as rotational bearings, eliminating duplicative parts saving material and assembly time cost.

As to claim 42, Stasiek et al. further disclose rotating the inner handle within the outer handle when a torque applied to the inner handle exceeds a threshold value (col. 8, lines 46-55).

As to claim 43, Stasiek et al. further disclose that the rotation of the inner handle relative to the outer handle is bi-directional (grooves give "play" to the mounting of the driven member, meaning it can move back and forth within the 30 degree arc, col. 5 lines 33-60).

As to claim 44, Stasiek et al. disclose applying a torque to the inner handle in a first direction that exceeds a threshold value so that the inner handle rotates within the outer handle (col. 8, lines 46-55), but fail to disclose applying a torque to the inner handle in a second direction that exceeds a threshold value so that the inner handle rotates within the outer handle.

Stasiek et al. disclose that the interface members are symmetrical with in a first and second direction (Figs. 5a, 5b and 6).

It would have been obvious to one of ordinary skill in the art to apply a torque to the inner handle in a second direction that exceeds a threshold value so that the inner handle rotates within the outer handle in order to enable use of the torque limiting tool to tighten both and loosen both left and right handed fasteners.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,239,875 to Stasiek et al. and U.S. Pat. No. 6,176,162 to Ludwig et al. as applied to claim 1 above and in further view of U.S. Pat. No. 6,308,598 to O'Neil.

Stasiek et al. and Ludwig et al. fail to disclose that the elongated surface is at least about 0.5 inches long or that the elongated surface is at least about 1.0 inch long.

O'Neil discloses a torque limiting tool with an elongated surface that bears the torque applied to the inner handle that is at least about .5 inches long and that is at least about 1 inch long (col. 6 lines 13-14).

It would have been obvious to one of ordinary skill in the art to modify the torque limiting tool of Stasiek et al, including the radial slot and radial biased interface member of Ludwig et al. to include the elongated surface at least about .5 inches or one inch long on the torque bearing interface member such that the pressure exerted on the interface member is small in relation to the torque applied to the inner handle.

Claims 25 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,239,875 to Stasiek et al. and U.S. Pat. No. 6,176,162 to Ludwig et al. as applied to claims 1 and 37 respectively in further view of U.S. Pat. No. 6,487,943 to Jansson et al.

As to claim 25, Stasiek et al. and Ludwig et al. fail to disclose that the inner surface of the outer handle comprises an asymmetrical structure.

Jansson et al. disclose that the surface against which the interface member is biased is asymmetrical (Fig. 3).

It would have been obvious to one of ordinary skill in the art to modify the torque limiting tool of Stasiek et al, including the radial slot and radial biased interface member of Ludwig et al. to include the asymmetrical surface against which the interface member is biased, that being the inner surface of the outer handle, so that the torque is limited in only one direction (col. 3, lines 40-50).

As to claim 45, Stasiek et al. and Ludwig et al. fail to disclose removing a spring that provides longitudinal biasing force from the inner handle and inserting a different spring having a different spring constant into the inner handle.

Jansson et al. disclose removing a spring that provides longitudinal biasing force from the inner handle and inserting a different spring having a different spring constant into the inner handle (using different springs, col. 4 lines 19-23 and assembly, col. 3, lines 9-15).

It would have been obvious to one of ordinary skill in the art to modify the method of Stasiek et al, including the step of biasing the interface members radially outward of Ludwig et al. to include the step of removing a spring that provides the longitudinal biasing force from the inner handle and inserting a different spring having a different spring constant into the inner handle in order to allow for adjustment of the torque required to overcome the biasing force without the need for an adjustment mechanism.

Double Patenting

Applicant is advised that should claim 1 be found allowable, claim 35 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. Nos. 2,919,602 and 6,832,533 disclose various torque limiting methods and devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George P. Bonanto whose telephone number is (571) 272-2182. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPB

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